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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,386	03/18/2004	Narayan P. Menon	42P11564C3	5483

8791 7590 05/02/2008

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EXAMINER	
RAMPURIA, SHARAD K	

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
05/02/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/803,386	MENON ET AL.	
	Examiner	Art Unit	
	Sharad Rampuria	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03/18/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Disposition of the claims

I. The current office-action is in response to the application filed on 1/17/06.

Accordingly, Claims 1-38 are imminent for further assessment as follows:

Oath/Declaration

II. The office acknowledges receipt of a properly signed oath/declaration.

Drawings

III. The receipt of drawings filed is accepted by examiner.

Information Disclosure Statement

IV. The Information Disclosure statement (IDS) submitted is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statements.

Claim Rejections - 35 USC § 102

V. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except

that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-21 & 23-38 are rejected under 35 U.S.C. 102 (e) as being anticipated by **Lu; Priscilla Marilyn et al.** [US 6212395 B1].

As per claim 1, **Lu** teaches:

A method (Abstract) comprising:

performing connection management and mobility management functions between a wireless access communication unit and a cellular network base station using GSM (Global System for Mobile Communications) connection management and GSM mobility management; (e.g. FIG. 19 shows in a simplified flowchart format the steps involved when an MS unit of the private cPBX network acts as a receiving unit to receive a call initiated either from the external network or from another MS unit in the private cPBX network. FIG. 19 starts at block 950. In block 952, the MSC receives an initial address message (IAM) message from the network through the cPBX for a call that is terminating at an MS unit considered home to this MSC. If the calling unit is another MS unit in private cPBX network, the IAM message received in block 952 represents substantially the same IAM message sent by the calling MS unit in block 814 of FIG. 16. In block 954, the MSC sends a map send information service request for the incoming call to the local HLR/VLR registry to locate the MS unit represented by the telephone number in the IAM message. In one embodiment, block 954 involves determining the current location of the destination MS unit in the private cPBX network (e.g., whether it has roamed away from its home location area), the IMSI number that corresponds to the telephone number received in the

IAM message, the particular services subscribed to by the destination MS unit, and the like. In block 956 the HLR/VLR registry, after locating the current location area of the destination MS unit in block 954, sends a map page message to the MSC to request the MSC to page the destination MS unit by either its IMSI or some version thereof. In block 956, the map page message is sent to the MSC where the MS unit is currently located (as determined after consulting with the private HLR/VLR registry). In one embodiment, both map send information message and map page messages are representative of a type of mobile application part message; Col.33; 34-65) and

transporting call data over a wireless connection between the wireless access communication unit and the base station using a non-GSM over-the-air physical layer protocol. (e.g. In block 958, the MSC, responsive to receiving the map page message in block 956, sends to the proper BSC a paging request message. The receiving BSC's may be more than one BSC if the HLR/VLR is uncertain regarding which BSC location area the destination MS unit is located. In one embodiment, all BSC's controlled by the cPBX where the destination MS unit currently locates are paged. This is because the HLR/VLR registry typically knows which cPBX of the private cPBX network the destination MS unit is currently located but does not know the exact BSC/BTS which is in the range of the destination MS unit. Responsive to the paging request, the BSC or BSC's page the destination MS unit and wait to hear the paging response from the destination MS unit; Col.33; 66-Col.34; 12)

As per claim 2, **Lu** teaches:

The method of claim 1, further comprising establishing a plurality of bearer paths between the wireless access communication unit and the base station, each bearer path corresponding to a wired subscriber unit connected to the wireless access communication unit. (Col.34; 64-Col.35; 8)

As per claim 3, **Lu** teaches:

The method of claim 2, further comprising establishing and maintaining a plurality of SCCP (Signaling Connection Control Part) links between a cellular network base station controller, coupled to the base station, and a cellular network mobile switching center, one SCCP link for each of the bearer paths. (Col.34; 13-21)

As per claim 5, **Lu** teaches:

The method of claim 1, wherein transporting call data over the wireless connection comprises: assigning, from among a plurality of time slots of a time frame, one or more duplex time slots to the wireless access communication unit, one of the duplex time slots being assigned for each of a plurality of wired subscriber units desiring to communicate over the wireless connection; transmitting, over a first frequency band, user-to-base traffic messages from the wireless access communication unit to the base station during a user transmission segment in each of the duplex time slots; and receiving, over a second frequency band, base-to-user traffic messages from the base station to the wireless access communication unit during a base transmission segment in each of the duplex time slots. (e.g. time slots; Col.19; 39-60)

As per claim 6, **Lu** teaches:

The method of claim 5, wherein the user transmission segment and the base transmission segment of each duplex time slot are separated by one-half the duration of the time frame. (e.g. time slots; Col.19; 39-60)

As per claim 7, **Lu** teaches:

The method of claim 1, wherein using a non-GSM over-the-air physical layer protocol comprises using a non-GSM over-the-air physical layer protocol end-to-end between the wireless access communication unit and a cellular network mobile switching center coupled to the base station. (Col.33; 34-65)

As per claim 8, **Lu** teaches:

The method of claim 1, wherein the connection management and mobility management functions provide at least call set-up, maintenance and release functions for each of a plurality of wired subscriber units coupled to the wireless access communication unit. (Col.33; 34-65)

As per claim 9, **Lu** teaches:

The method of claim 1, further comprising transporting the call data between the base station and a cellular network mobile switching center using a GSM protocol. (Col.33; 34-65)

As per claim 10, **Lu** teaches:

The method of claim 1, further comprising: transmitting call data received from the wireless access communication unit over a backhaul connection from the base station to a cellular network base station controller; relaying the call data received from the wireless access communication unit from the base station controller to a wireless network mobile switching center using a GSM protocol; transmitting from the mobile switching center to the base station controller call data intended for the wireless access communication unit using the GSM protocol; and relaying the call data intended for the wireless access communication unit to the base station over the backhaul connection. (Col.8; 23-39)

As per claim 11, **Lu** teaches:

The method of claim 1, wherein transporting call data over the wireless connection comprises transmitting signaling messages between the wireless access communication unit and the base station. (Col.33; 34-65)

Claims 12-15 are the **machine readable medium** claims, corresponding to **method** claims 1-2, 5, 10 respectively, and rejected under the same rational set forth in connection with the rejection of claims 1-2, 5, 10 respectively, above.

Claims 16, 19 are the **apparatus** claims, corresponding to **method** claims 1, 3 respectively, and rejected under the same rational set forth in connection with the rejection of claims 1, 3 respectively, above.

Claims 21, 24-25, 36 are the **system** claims, corresponding to **method** claims 1, 10, 5, 3 respectively, and rejected under the same rational set forth in connection with the rejection of claims 1, 10, 5, 3 respectively, above.

As per claim 17, **Lu** teaches:

The mobile switching center of claim 16, further comprising a transcoding unit, wherein the mobile switching center is connected to the base station controller through the transcoding unit. (260; Fig.3B)

As per claim 18, **Lu** teaches:

The mobile switching center of claim 16, wherein the base station controller and the mobile switching center communicate across a GSM A-interface. (Col.14; 54-66)

As per claim 20, **Lu** teaches:

The mobile switching center of claim 16, wherein the mobile switching center suppports and maintains calls from the wired subscriber units to the mobile switching center via the base station and the base station controller. (Col.14; 54-66)

As per claim 26, **Lu** teaches:

The communication system of claim 24, wherein functional entities of the base station are addressable using service access point identifiers. (Col.14; 54-66)

As per claim 27, **Lu** teaches:

The communication system of claim 24, wherein the base station controller and the wireless access communication unit comprise endpoints for voice encoding and decoding. (Col.5; 15-28)

As per claim 28, **Lu** teaches:

The communication system of claim 24, wherein the base station controller and the wireless access communication unit comprise endpoints for encryption and decryption of bearer traffic. (Col.9; 44-53)

As per claim 29, **Lu** teaches:

The communication system of claim 24, wherein the base station controller and the wireless access communication unit comprise endpoints for forward error correction. (Col.21; 54-62)

As per claim 30, **Lu** teaches:

The communication system of claim 24, further comprising a transcoding unit, wherein the mobile switching center is connected to the base station controller through the transcoding unit. (Col.14; 54-66)

As per claim 31, **Lu** teaches:

The communication system of claim 24, wherein the base station controller and the mobile switching center communicate across a GSM A-interface. (Col.14; 54-66)

As per claim 32, **Lu** teaches:

The communication system of claim 24, wherein the wireless access communication unit is connected to the wired subscriber units through a local area telephone switch. (Col.14; 54-66)

As per claim 33, **Lu** teaches:

The communication system of claim 32, wherein the local area telephone switch comprises either a private branch exchange (PBX) or key telephone system (KTS). (Col.14; 54-66)

As per claim 34, **Lu** teaches:

The communication system of claim 32, wherein the wireless access communication unit comprises a plurality of subscriber ports connected to the local area telephone switch over a plurality of trunks; a plurality of user interfaces connected to the subscriber ports, one user interface for each subscriber port; a radio transceiver; and a controller connected to the user interfaces and the radio transceiver, the controller managing the transfer of data between the user interfaces and the radio transceiver. (Col.14; 54-66)

As per claim 35, **Lu** teaches:

The communication system of claim 34, wherein the user interfaces are individually addressable. (Col.14; 54-66)

As per claim 37, **Lu** teaches:

The communication system of claim 34, wherein the wireless access communication unit sets up and maintains calls from the wired subscriber units to the mobile switching center via the base station and the base station controller. (Col.14; 54-66)

As per claim 38, **Lu** teaches:

The communication system of claim 24, wherein the base station supports a multiple access communication protocol, the base station establishing wireless communication paths with mobile user stations upon demand. (Col.14; 54-66)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4 & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lu** in view of **Kulkarni; Sanjay et al.** [US 5862481 A].

As per claim 4, 22, **Lu** teaches all the particulars of the claim except transporting the call data using an IS-661 format. However, **Kulkarni** teaches in an analogous art, that the method of claims 1, 21, wherein transporting call data over the wireless connection comprises transporting the call data using an IS-661 format. [Col.6; 47-55] Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify **Lu** including transporting the call data using an IS-661 format in order to provide a method of an inter-technology roaming proxy that translates and routes requests and responses between two networks having different protocols.

Conclusion

VI. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is (571) 272-7870. The examiner can normally be reached on M-F. (8:30-5 EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571) 272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000 or *EBC@uspto.gov.*

/Sharad Rampuria/
Primary Examiner
Art Unit 2617